

**METHOD AND ARRANGEMENT FOR DETECTING A RANDOM ACCESS CHANNEL PREAMBLE IN A COMMUNICATION SYSTEM**

**ABSTRACT OF THE DISCLOSURE**

In a method and arrangement for detecting a random access channel preamble in a received uplink signal, the uplink signal is received at one or more receive antennas and contains data related to a random access channel preamble. The received uplink signal is subjected to spatial processing and temporal processing in order to detect the random access channel preamble. A best cell portion for communicating with a user may also be determined based on the detected preamble. The best cell portion represents a portion of a cell where a received uplink signal from a user has a highest signal to interference ratio. The detected random access channel preamble is indicative of the best cell portion for communicating with the user.